

Resilient ORGANISATIONS



A collaboration between research & industry

Resilient Organisations Research Report 2013/06
ISSN 1178-7279

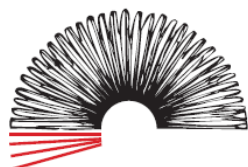
Employee Resilience Scale (EmpRes): Technical Report

Katharina Näswall¹
Joana Kuntz¹
Morgana Hodliffe¹
Sanna Malinen²

¹Department of Psychology

²Department of management, Marketing and Entrepreneurship
University of Canterbury, Christchurch, New Zealand

December 2013



EMPLOYEE
RESILIENCE
RESEARCH



Resilient Organisations Research Programme, New Zealand

www.resorgs.org.nz

Abstract

Building on definitions of organisational resilience, employee resilience is conceptualised as the capacity of employees, facilitated and supported by the organisation, to utilise resources to positively cope, adapt and thrive in response to changing work circumstances. To date, measures of resilience are more focused on capturing resilience as an individual characteristic, rather than something enabled by the organisation. The present report presents a preliminary validation of the Employee Resilience Scale (EmpRes).

About the Resilient Organisations Research Programme

“Building more resilient organisations, able to survive and thrive in a world of uncertainty, through research and practice”

We live in an increasingly complex world dealing with a broad spectrum of crises arising from both natural and man-made causes. Resilient organisations are those that are able to survive and thrive in this world of uncertainty.

Who we are:

The Resilient Organisations Research Group (ResOrgs) is a multi-disciplinary team of over thirty researchers and practitioners that is New Zealand based and with global reach. A collaboration between top New Zealand research Universities and key industry players, including the University of Canterbury and the University of Auckland, ResOrgs is funded by the Ministry for Science and Innovation through the Natural Hazards Research Platform and supported by a diverse group of industry partners and advisors. The research group represents a synthesis of engineering disciplines and business leadership aimed at transforming organisations into those that both survive major events and thrive in the aftermath.

We are committed to making organisations more resilient in the face of major hazards in the natural, built and economic environments. Resilient organisations are able to rebound from disaster and find opportunity in times of distress. They are better employers, contribute to community resilience and foster a culture of self-reliance and effective collaboration.

What we do:

The ResOrgs programme of public good research is aimed at effective capability building through research activities with significant impacts on policy and practice. Activities and outputs of the group, in existence since 2004, include informing and focusing debate in areas such as Civil Defence Emergency Management, post-disaster recovery, and the resilience of critical infrastructure sectors, in addition to core activities in relation to organisation resilience capability building and benchmarking. We have produced practical frameworks and guides and helped organisations to develop and implement practical resilience strategies suitable to their environment.

Why we do it:

In an increasingly volatile and uncertain world, one of the greatest assets an organisation can have is the agility to survive unexpected crisis and to find opportunity to thrive in the face of potentially terminal events. We believe such resilience makes the most of the human capital that characterises the modern organisation and offers one of the greatest prospects for differentiating the successful organisation on the world stage. This resilience is typified by 20/20 situation awareness, effective vulnerability management, agile adaptive capacity and world class organisational culture and leadership. More resilient organisations lead to more resilient communities and provide the honed human capital to address some of our most intractable societal challenges.

For more information see our website: www.resorgs.org.nz

About the Employee Resilience Research Group

The Employee Resilience Research group investigates resilience from the standpoint of the employee, and of the organisation at large with the aim to advance knowledge of the factors contributing to worker resilience, and of the key outcomes for organisations committed to developing resilient workers, namely engagement, high performance and wellbeing. We collaborate closely with the Leading and Managing Resilient Organisations research group (LORE) and Resilient Organisations (ResOrgs),

The Employee Resilience Research group defines employee resilience as an ability to thrive in a changing environment, which is facilitated by organisational initiatives. This means that organisations play a key role in how well their employees are able to adjust and perform under pressure.

We integrate employee-level information with specific organisational initiatives to create a deeper understanding of whether the processes currently in place effectively support resilience among employees. In addition, we identify areas of intervention to address and facilitate employee resilience.

Resilience in organisations and among employees is relevant in any context which introduces challenges and change. We therefore couple rigorous scientific methodologies with practitioner expertise to encourage organisations to capitalise on employee resilience, and guide the process of increasing organisational resilience and performance through staff capabilities.

For more information see our website: www.psyc.canterbury.ac.nz/research/empres

Contents

Abstract	ii
<i>About the Resilient Organisations Research Programme</i>	iii
<i>About the Employee Resilience Research Group</i>	iv
Introduction	1
Resilience Defined	2
Employee Resilience Defined	3
Method	4
Phase 1: Scale Development	4
Participants	4
Procedure	5
Results	5
Phase 2	5
Participants and Procedure	5
Results	6
Conclusion	6
References	8

Introduction

Contemporary work has become increasingly changeable, uncertain and market-driven due to technological advancement, globalisation and competition (Allvin, Aronsson, Hagström, Johansson, & Lundberg, 2011). Organisations are required to swiftly and frequently conduct large-scale changes through downsizing, mergers and acquisitions in order to survive and thrive (De Meuse, Marks, & Dai, 2011; Gordon, Stewart, Sweo, & Luker, 2000). In addition to market demands, the rising number of environmental disasters poses further challenges that require both adaptive and planning capabilities (Lee, Vargo, & Seville, 2013; McKie, 2009). In the current business environment, organisations are required to become increasingly resilient. Organisational resilience is defined as “a function of an organization’s overall situation awareness, management of keystone vulnerabilities, and adaptive capacity in a complex, dynamic, and interconnected environment” (McManus, Seville, Vargo, & Brunsdon, 2008, p. 82). This involves effective management and overcoming of adversity or crisis by operating in sometimes unfamiliar territory in order to fulfil organisational objectives (Seville, Brunsdon, Dantas, Le Masurier, Wilkinson, & Vargo, 2006). According to the organisational resilience literature, resilience allows organisations to go beyond merely scraping through times of organisational instability and adversity, and instead thrive and capitalise on change and uncertainty (Youssef & Luthans, 2007).

Importantly, recent research suggests that an organisation’s capacity to build resilience, and indeed to successfully manage crises and transitions, is largely contingent on its ability to capitalise on, and skilfully integrate, core practices and procedures with employee contributions (Lengnick-Hall, Beck, & Lengnick-Hall, 2011; Shin, Taylor, & Seo, 2012). In essence, organisational resources and practices can be viewed as enabling conditions for the development of a resilient workforce (Shin et al., 2012), which in turn determines organisational capacity to overcome challenges and, ideally, to create a competitive edge. This implies that achieving organisational resilience, and indeed understanding the factors that contribute to the development of this capacity, requires the identification of factors that foster employee resilience in the workplace.

Though research suggests that individuals who are more resilient cope better with change, there is need for an employee-centric measure of resilience to enable the empirical investigation of resilience on the employee level. The present report outlines the development of an employee resilience measure (EmpRes), which organisations can use to monitor resilience levels in their staff, and identify areas contributing to the development of employee resilience.

Resilience Defined

The resilience construct has developed in several different research disciplines, and this has resulted in a plethora of conceptual and operational definitions (Herrman et al., 2011; Luthar, Cicchetti, & Becker, 2000). Early resilience research focussed on individual level dispositional or trait-like resilience, defining it as "...a personality characteristic that moderates the negative effects of stress and promotes adaption..." (Wagnild & Young, 1993, p.165). This definition was developed based on clinical studies of children who were "thriving" despite their high risk circumstances (being schizophrenic, having parents with mental illness, living in poverty, dealing with maltreatment and violence; Luthar et al., 2000; Masten, 2001). These children appeared to be protected by an extraordinary inner strength and intrinsic adaptive capabilities. Some of the characteristics commonly associated with resilience were autonomy, self-esteem, internal locus of control and self-efficacy (Wagnild & Young, 1993).

Although research, in particular within positive psychology, continues to add to the exhaustive list of personal qualities associated with resilience, such as optimism (Peterson, 2000) and self-determination (Schwartz, 2000), researchers have recognised the contribution of other protective forces such as family, culture and community (Cicchetti, 2010). According to Bonanno and Mancini (2008), the combination of these socio-contextual factors helps or hinders the resilience of individuals through the presence or absence of useful resources.

Most definitions of resilience outline one of two perspectives on resilience; 1) reactive recovery, or 2) stability after traumatic events, such as natural disaster or bereavement (Maguire & Cartwright, 2008). As an example of the reactive recovery perspective, Youssef and Luthans (2007) argued that during stressful situations "the capacity for resilience promotes the recognition and acknowledgement of such impact, allowing the affected individual the time, energy, and resource investment to recover, rebound, and return to an equilibrium point" (p. 779-780). In line with this proposition the Oxford Dictionary defines resilience as the "ability of a substance or object to spring back into shape" and "the capacity to recover quickly from difficulties; toughness". These definitions acknowledge the destructive impact of adverse events and the importance of returning back into a stable state of homeostasis following disequilibrium.

The second perspective, of resilience as stability, focuses on the maintenance of a stable state of equilibrium in the face of adversity or a stressful event. Bonanno (2004) stated that resilience ensured that physical and mental health was preserved despite the presence of an isolated traumatic event. Similarly, Home and Orr (1997) identified the importance of avoiding periods of regressive behaviour through the utilisation of resilience capacities to absorb the change. These definitions, however, appear to disregard the difficulty of maintaining a

stable level of performance and well-being during and immediately after devastating circumstances.

More recent enquiry has departed from the dispositional view of resilience and recognised its developable nature. Luthans defined resilience as the “developable capacity to rebound or bounce back from adversity, conflict, and failure or even positive events, progress, and increased responsibility” (2002, p. 702). This was supported by Waite and Richardson’s (2004) delineation of resilience as “the process and experience of being disrupted by change, opportunities, stressors, and adversity and, after some introspection, ultimately accessing gifts and strengths (resilience) to grow stronger through the disruption” (p. 178). O’Leary and Ickovics (1995) and Richardson (2002) noted that repeated exposure to adversity, change, and stress followed by successful adaptation (i.e., dealing with the challenges) allowed individuals to exceed their previous levels of coping. This was outlined as a proactive component of resilience, which allows individuals to surpass the point of equilibrium (Youssef & Luthans, 2007) and actually grow from adversity (Lengnick-Hall et al., 2011). It has also been argued that resilience can be improved through the development of coping strategies that made individuals more flexible and emotionally stable or rational when presented with change (Avey, Luthans & Jensen, 2009; Tugade & Fredrickson, 2004).

Employee Resilience Defined

Building on definitions of organisational resilience, employee resilience is conceptualised herein as the capacity of employees, facilitated and supported by the organisation, to utilise resources to positively cope, adapt and thrive in response to changing work circumstances. This definition incorporates Luthans’ (2002) description of resilience as being a “developable capacity” rather than a stable personality trait as suggested in earlier theorisations (cf. Wagnild & Young, 1993). Nevertheless, our conceptualisation goes beyond the definition of resilience proposed by Luthans, which suggests that it is a recovery process in which one returns back to one’s original state of equilibrium. Instead, our definition highlights the contemporary view of resilience as a transformational process in which individuals not only cope and successfully deal with change but also learn from it and adapt accordingly to thrive in the new environment (Lengnick-Hall et al., 2011; Richardson, 2002; Baird et al., 2013). The development of this capacity means that employees can utilise past experiences with change and adversity to be more flexible and adaptable in the future (Avey, Luthans & Jensen, 2009; Tugade & Fredrickson, 2004), which in turn facilitates successful negotiation of challenges. Our focus on resilience as something that can be developed, rather than a stable trait, also suggests that the organisational environment influences the level of employee resilience through the provision of enabling factors. We propose that an open, supportive, collaborative and learning-

oriented work environment fosters employee resilience. Based on this premise, the organisational context is pivotal to the development of employee resilience.

The definition and aspects of the construct presented above served as a basis for the scale development presented in this report. The measure was tested in two samples, the first to investigate item wording and the second to examine measurement properties.

Method

Phase 1: Scale Development

A deductive approach was used in the initial phase of scale development to produce a research-informed theoretical definition of Employee Resilience. This involved combining, adapting and expanding definitions from former literature to conceptualise the specific meaning of the construct (Hinkin, 1995). Previous research, in particular the Resilient Organisations Resilience Benchmark Survey by Resilient Organisations, was used as the basis for developing the theoretical dimensions that characterise the construct. Within each dimension, multiple items were generated that addressed employee resilience accordance with the definition. In total, six theoretically derived constructs and twenty three items were developed.

In the second stage of development, the preliminary items were adapted and improved with the assistance of two Subject Matter Experts (SMEs) from the Management Department at Canterbury University. Items were shortened and made clearer and more employee-specific. After several reviews of the preliminary scale, 5 sub-dimensions and 18 items were chosen based on the recommendations from the SMEs and collective agreement by the authors. The constructs identified were 'learning orientation', 'proactive posture', 'positive outlook', 'network leveraging' and 'adaptive capacity'. An example of some of the items generated within the theoretical dimension 'learning orientation' include: "I learn from mistakes and improve the way I do my job" and "I re-evaluate my performance and continuously improve the way I do my work". Items for 'network leveraging' include: "I approach managers when I need their expertise or support" and "I effectively collaborate with others to handle unexpected challenges". The 18 chosen items were compiled into a questionnaire to use for pilot testing.

Participants

The questionnaire was distributed among 127 students from a tertiary institution in New Zealand, comprising 81 females and 29 males (17 of the participants declined to state their gender). The sample group consisted of 14 postgraduate level students and 113 undergraduate level students. Within the sample, 95 of the students had jobs of which 85 considered 'short term interim jobs', 7 considered

‘medium-long term careers’ and 3 classified as ‘long term interim’ or ‘volunteer’ jobs. 32 of the students did not work.

Procedure

The participants were informed that the scale would measure their work-related attitudes, rather than their resilience, to ensure that they would not be primed to answer the scale in a particular way. The participants were asked to rate the extent to which they agreed or disagreed with the series of statements using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). A space for comments was provided for each item so that participants could suggest alternative wording or structure for confusing or unclear items. All participants were informed that their responses would be confidential.

Results

The pilot group identified four items which had issues with clarity and comprehensibility; therefore these items were removed from the scale after pilot testing.

There were two items in particular that appeared to be problematic as they brought down the reliability of the scale and made interpretation of the of the factor analysis difficult; however, they were retained for the next phase in order to examine how they would behave within a group of full-time working professionals. Sample items of the first version of the scale items are displayed in Table 1.

Table 1. Sample items after Phase 1.

1.	I effectively adapt to change at work.
2.	I continuously re-evaluate my performance and strive to improve the way I do my work.
3.	I approach managers when I need their expertise

Phase 2

Participants and Procedure

In the next step the scale was tested in the sample of white-collar employees. This sample was drawn from one organisation with offices all over New Zealand. Participants were invited via email, which included a link to an online survey asking about a number of different work-related factors (leadership, work-related attitudes, etc.). Of the 302 employees invited, 275 responded for a response rate of 91%. After listwise deletion of missing data the effective sample was 267. The scale presented in Table 2 was used. The participants were asked to rate the extent to which they agreed or disagreed with the series of statements using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree)

Results

The 14 remaining items (see Table 1) were included in an exploratory factor analysis (principal axis factoring) with oblique (direct oblimin) rotation to examine the dimensional structure of the scale. The criterion used for retaining an item within the scale was a loading of above 0.3 on one factor and below 0.3 in all other factors. Items with no loadings on any factor were removed.

The results showed that of the 14 items, items number 4 and number 11, loaded below the .3 cut-off. Comments on these items from the student sample also supported the removal of these items, and a new factor analysis was run. The results are shown in Table 2.

Two factors were extracted instead of the expected 1. However, on inspection of the eigenvalues and the factor correlation, it was determined that the measure most likely captures one dimension of resilience, as the factor correlation is quite high at .66. Also, the criterion for extracting factors based on eigenvalues has been criticised for being too sensitive and often extracting more factors than appropriate (Fabrigar & Wegener, 2012). The reliability of the 12-time resilience scale was .89.

Conclusion

The results so far support a one-dimensional measure of Employee Resilience with high reliability. Next steps include investigating discriminant validity and criterion validity.

Table 2. Results of the factor analysis of the 12 retained items

	1	2
Item 1	.740	.067
Item 2	.465	.317
Item 3	.578	-.083
Item 4	.538	.304
Item 5	.142	.597
Item 6	.230	.468
Item 7	.774	-.007
Item 8	.145	.331
Item 9	-.134	.735
Item 10	.292	.473
Item 11	.639	.129
Item 12	.731	.003
Eigenvalue	5.175	.514
Factor correlation		
Factor 1	1	
Factor 2	.66	1

Please note: The Employee Resilience Scale has been somewhat revised. To obtain the latest version of the scale, please contact the authors.

References

- Allvin, Michael, Aronsson, Gunnar, Hagström, Tom, Johansson, Gunn, & Lundberg, Ulf. (2011). *Work without boundaries: psychological perspectives on the new working life*: Wiley.
- Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: A positive resource for combating employee stress and turnover. *Human Resource Management, 48*(5), 677-693.
- Baird, R., Heugten, K. v., Walker, B., & Nilakant, V. (2013). *Adaptive Resilience – How Organisations Responded in Christchurch*. Paper presented at the Creating Resilience for a Hazardous World - Symposium, University of Canterbury, Christchurch, New Zealand.
- Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American psychologist, 59*(1), 20.
- Bonanno, G. A., & Mancini, A. D. (2008). The human capacity to thrive in the face of potential trauma. *Pediatrics, 121*(2), 369-375.
- Cicchetti, Dante. (2010). Resilience under conditions of extreme stress: a multilevel perspective. *World Psychiatry, 9*(3), 145-154.
- De Meuse, K. P., Marks, M. L., & Dai, G. (2011). Organizational downsizing, mergers and acquisitions, and strategic alliances: Using theory and research to enhance practice. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology* (pp. 729-768). Washington, DC: American Psychological Association.
- Fabrigar, L. R., & Wegener, D. T. (2012). *Exploratory factor analysis*. New York, NY US: Oxford University Press.
- Gordon, Shelley S, Stewart, Wayne H, Sweo, Robert, & Luker, William A. (2000). Convergence versus strategic reorientation: The antecedents of fast-paced organizational change. *Journal of Management, 26*(5), 911-945.
- Herrman, Helen, Stewart, Donna E, Diaz-Granados, Natalia, Berger, Elena L, Jackson, Beth, & Yuen, Tracy. (2011). What is resilience? *Canadian journal of psychiatry. Revue canadienne de psychiatrie, 56*(5), 258-265.
- Hinkin, Timothy R. (1995). A review of scale development practices in the study of organizations. *Journal of Management, 21*(5), 967-988.

- Home, J. F., & Orr, J. E. (1997). Assessing behaviors that create resilient organizations. *Employment Relations Today*, 24(4), 29-39.
- Lee, A. V., Vargo, J., & Seville, E. (2013). Developing a Tool to Measure and Compare Organizations' Resilience. *Natural Hazards Review*, 14(1), 29-41.
- Lengnick-Hall, C. A., Beck, T.E., & Lengnick-Hall, M.L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243-255.
- Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, 23(6), 695-706.
- Luthar, S. S., Cicchetti, D., & Becker, Bronwyn. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child development*, 71(3), 543-562.
- Maguire, B., & Cartwright, S. (2008). Assessing a community's capacity to manage change: A resilience approach to social assessment. *Canberra: Bureau of Rural Sciences*.
- Masten, Ann S. (2001). Ordinary magic: Resilience processes in development. *American psychologist*, 56(3), 227.
- McKie, Robin. (2009). Climate change: melting ice will trigger wave of natural disasters. *The Observer*, 6, 20.
- McManus, S., Seville, E., Vargo, J., & Brunsdon, D. (2008). Facilitated process for improving organizational resilience. *Natural Hazards Review*, 9(2), 81-90.
- O'Leary, V. E., & Ickovics, J. R. (1995). Resilience and thriving in response to challenge: an opportunity for a paradigm shift in women's health. *Women's health (Hillsdale, NJ)*, 1(2), 121.
- Peterson, C. (2000). The future of optimism. *American psychologist*, 55(1), 44.
- Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of clinical psychology*, 58(3), 307-321.
- Schwartz, B. (2000). Self-determination: The tyranny of freedom. *American psychologist*, 55(1), 79.
- Seville, E., Brunsdon, D., Dantas, A., Le Masurier, J., Wilkinson, S., & Vargo, J. (2006). Building Organisational Resilience: A summary of key research findings.

- Shin, J., Taylor, M. S., & Seo, M.-G. (2012). Resources for change: The relationships of organizational inducements and psychological resilience to employees' attitudes and behaviors toward organizational change. *Academy of Management Journal*, 55(3), 727-748.
- Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of personality and social psychology*, 86(2), 320.
- Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of nursing measurement*.
- Youssef, C. M., & Luthans, F. (2007). Positive Organizational Behavior in the Workplace The Impact of Hope, Optimism, and Resilience. *Journal of Management*, 33(5), 774-800.